

Name: _____

p1105: Factoring when $a = 1$ (v18)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 - 11x + 18$

$$(x - 2)(x - 9)$$

2. Factor $x^2 + 5x - 6$

$$(x + 6)(x - 1)$$

3. Factor $x^2 + 3x - 40$

$$(x - 5)(x + 8)$$

4. Factor $x^2 - 12x + 32$

$$(x - 8)(x - 4)$$

5. Factor $x^2 - 13x + 40$

$$(x - 8)(x - 5)$$

6. Factor $x^2 - 1$

$$(x - 1)(x + 1)$$

7. Factor $x^2 + 7x - 18$

$$(x + 9)(x - 2)$$

8. Factor $x^2 - x - 6$

$$(x + 2)(x - 3)$$

9. Factor $x^2 - x - 56$

$$(x - 8)(x + 7)$$

10. Factor $x^2 - 5x - 36$

$$(x + 4)(x - 9)$$

11. Factor $x^2 + x - 6$

$$(x + 3)(x - 2)$$

12. Factor $x^2 + 3x - 10$

$$(x - 2)(x + 5)$$

13. Factor $x^2 + 4x - 5$

$$(x + 5)(x - 1)$$

14. Factor $x^2 - 14x + 49$

$$(x - 7)(x - 7)$$

15. Factor $x^2 - 6x - 27$

$$(x - 9)(x + 3)$$